DOCUMENT RESUME

ED 301 963 EA 020 537

AUTHOR Chen, Michael
TITLE The Impact of Ecological Factors on Educational Reform.
PUB DATE Mar 88
NOTE 12p.; Paper presented at the Annual Meeting of the Comparative and International Education Society (Atlanta, GA, March 17-20, 1988).
PUB TYPE Reports - Research/Technical (143) -- Speeches/Conference Papers (150)

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS Census Figures; Cohort Analysis; Community Role; *Demography; *Ecological Factors; *Educational Change; Educational Diagnosis; *Educational Environment; Educational Research; *Educational Status Comparison; Elementary Secondary Education; *Ethnic Groups; Foreign Countries; Rural Urban Differences; Statistical Analysis
IDENTIFIERS *Israel

ABSTRACT

This study investigated the ecological factors that affect structural school reform implementation in Israel. The sample used was the whole student population that appeared in the 1972 census. By raising educational achievement levels, restructuring the learning sequence, and rezoning ethnically and economically segregated areas to promote integration, school reforms aimed at reducing the achievement gap between Jews from Asia and North Africa and those from Europe and North America. The study hypothesized that the larger the community and the higher the percentage of Sephardic Jews (whose origins are either European or North American), the greater the likelihood of realizing structural and educational school reform objectives. The research concluded that larger communities in Israel were more receptive to school reform initiatives; however, ethnic heterogeneity diminished the pace of reform implementation and consequent student performance. While the reforms improved Israeli student educational performance as a whole, larger more developed communities developed further, while the smaller communities, with their preponderant population of Jews from North Africa and Asia, did not progress enough to close existing performance gaps. (JAM)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED301963

Michael Chen
Tel Aviv University

THE IMPACT OF ECOLOGICAL FACTORS ON EDUCATIONAL REFORM

Paper presented at the Annual Meeting of Comparative and International Education Society, Atlanta, Georgia. March 17-20, 1988.

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

X This document has been reproduced as received from the person or organization originating it.

☐ Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

M Chen

TO THE EDUCATIONAL RESOURCES INFOPMATION CENTER (ERIC)."

EA 020 537

In order both to reduce ethnic tensions and to improve the overall level of education, a school reform was adopted in Israel in 1969 for the Jewish sector of the state educational system. The reform was expressed in a restructuring of the school system. Since one of its major aims was the reduction of the achievement gap between the two major Jewish ethnic groups in the society, those whose origins are from Asia or North Africa as contrasted with those from European or American backgrounds, the reform was of unequal benefit to the various groups and, hence, was acccepted differently in each community. Moreover, this reform was formulated as a governmental recommendation rather than as an obligatory national law. This, together with the mixed reactions it received, considerably complicated its implementation.

The major changes included in the school reform were: (1) a restructuring of the sequence of learning from an elementary (8 years) - secondary (4 years) sequence to an elementary (6 years) - intermediate (3 years) - senior (3 years) sequence, (2) formal and physical linkage between the new intermediate division, which is part of Compulsory education, and the senior division, which is not compulsory, and(3) zoning in such a way as to produce ethnically integrated secondary schools (i.e. intermediate and senior divisions).

The implications of these changes were several. First of all, instead of one crucial point of selection (between elementary and secondary schooling) as in the old system, two points of selection were created under the new structure. Second, the linking of a compulsory division (intermediate) with a noncompulsory division (senior) was expected to increase the number of students continuing their education at the senior high school level, and lend greater continuity to the different educational phases by creating a neighborhood school system from first grade to twelfth grade. Finally, and socially most important, the zoning of school districts to include an ethnic admixture of students meant that schools were confronted with

children from all socioeconomic strata, possessing a wide range of abilities, achievements, and attitudes towards school. Moreover, according to the reform, it was expected that classroom composition in these schools would reflect the heterogeneity of their student body as a whole.

In addition to these aspects, the Israeli school reform included a variety of less prominent components. For example, new instructional programs were introduced in the intermediate division, better qualified teachers were required, student counselling services were expanded more extra-curricular activities were added, and relatively large secondary schools were created.

Since implementation was not legally mandatory, on a nationwide basis, local communities decided if and when to adopt the changes required in the school reform on the basis of local political, social, and economic realities. [2] Moreover, the mode of implementation in one community was not identical to that in another, because of differences in prior conditions, population composition, availability of qualified teachers, etc. For example, some junior high schools were linked to comprehensive senior divisions while others were joined to senior high schools that were exclusively academically oriented.

It was also found that a community or a school district exhibited a willingness to become integrated when this coincided with its particular values and educational goals. For example, the secular state schools which tend to reflect a relatively universal approach to education manifested greater willingness to integrate than the religious state schools, the latter having traditionally tended to take a more elitist and selective approach to education.

The school reform in Israel had been planned to be completed in eight years. Now, twenty years later, only two-thirds of the local communities have actually implemented it. Only 55% of the cohort of 12- to 14 year-olds study in junior high schools; the rest continue to study in elementary schools. Since 1980, very few

regional municipalities have decided to implement the reform.

The present study analyzes five demographic characteristics of the Jewish communities in Israel: (1) size of the community: (2) percentage of students from Asian and/or African background (so-called "Sephardic" or "Oriental" students); (3) the level of ethnic heterogeneity of the educational system; (4) percentage of sixth-grade students studying in religious public schools (Israel's public schools are divided into a secular and a religious system); (5) the level of local development of the educational system. That is, whether or not there are high schools and/or institutions of higher education in addition to elementary schools.

These ecological factors have social education meanings, and each factor can have an accelerating or decelerating effect on the implementation of structural school reform.

The hypotheses are: (1) the larger the community and the more developed the structure of education, the greater the likelihood of implementing school reform; (2) the higher the percentage of Sephardic students in the school system, the greater the likelihood of implementing school reform (since the objective of school reform was to enhance the educational level of this population).

Sample: All the Jewish communities that appeared in the 1972 Census were included, and demographic data for 1970-72 were collected. The dependent variable was based on the starting date of implementing school reform in each community (see Table One).

Research Methods: Communities were divided into three types: cities, local councils (an urban area of less than 20,000 residents), and regional councils (a rural area consisting of 10-20 towns). The communities were grouped according to whether or nor not they had started to implement reform by 1985 (see Table Two).

Variables: (1) Implementation of school reform: communities were checked in the official government publication of schools to determine whether they were listed as having junior high schools; (2) the size of the communities, as measured by the 1972 population figures; this variable was transformed on a base-10 logarithm because of its biased distribution; (3) percentage of Sephardic (Asian or African ethnic background) students in elementary school (1983 figure); this variable correlates high (.94) with the percentage of population of Asian or African origin in each community: (4) percentage of students studying in religious schools; this variable was established by the percentage of sixth grade students studying in public religious elementary schools in 1971; (5) level of ethnic heterogeneity; this indicator was measured by the deviation of the percentage of Sephardic students in each community from the proportion 50% Sephardic/ 50% Ashkenazi (European origin).

Major Results and Analysis: Table One shows two major periods in implementing the structural school reform in Israel. From 1969 to 1976, 52% of the communities implemented changes in the structure of the educational system, affecting 37% of all students. In the following nine years an additional 13% of the communities joined the reform, affecting a further 16% of the students. This pattern of implementation persists when we analyze local and regional councils, as shown in the next table. Table Two shows that more regional councils implemented the reform, with cities second and local councils lowest in implementation of reform.

Table Three shows the averages and standard deviations of the demographic variables according to the categories reform/ no reform. From the data we can conclude that communities that implemented reform are larger in population size

(p=.004, df=140, t=3.01). The percentage of religious students is high (p=.051, df=141, t=1.98) and the level of educational development is high (p=.000, df=140, t=5.04). The level of ethnic heterogeneity and the ethnic make-up of the communities are not significantly different between communities implementing reform and those not implementing reform.

Table Four shows that reform in cities and local and regional councils correlates with the size of the community (r=.21; .40) and with the level of educational development (r=.34; .56). However, in the regional councils the implementation of reform correlates with level of ethnic heterogeneity (r=.42). In addition, in the cities and local councils, higher correlation coefficients are found among the heterogeneity level, the percentage of Sephardic students, and the percentage of religious students. Cities and local councils also display a high correlation (r=.75) between the size of the community and the level of educational development. In regional councils the correlations are less significant.

In sum, the findings support the major hypothesis, namely, that the ecological factors of the communities explain significantly the tendency to implement or not to implement school reform. Out of all the demographic variables, the most important was the type of community.

The statistical discriminant analysis reveals also that it is the level of educational development of the school system in 1971 more than any other demographic factor, which accounts for the decision to structural reform in the community. A surprising finding was the positive relationship between the percentage of religious students and reform implementation, since the official position of the religious public school system was against the reform.

Another interesting finding was that implementing the reform was not related to the percentage of Sephardic students. On the contrary, the greater the ethnic heterogeneity of the school system, the smaller the likelihood of reform in cities and

local councils. This factor was not found to be influential in regional councils.

From a theoretical point of view, the findings support radical explanations of educational reforms. The ideological rational behind the school reform in Israel has been to reduce the educational gap between developed and underdeveloped communities and to encourage ethnic integration within each community. In fact, the findings show very little relation between the ethnic heterogeneity of the community and its tendency to implement an educational reform.

On the other hand, large communities, with a high level of educational development to begin with, adopted school reform, with all the financial and educational benefits associated with it, more readily than small and underdeveloped communities. Paradoxically enough since the reform improved the educational system as a whole the developed communities developed further while the underdeveloped did not progress enough to close the existing gaps.

Table 1: Implementation of School Reform 1971-1985: Percentage of Communities, Number os Junior High School and Percentage of Students

	Percentage of Communities N=147	Percentage of 7th-9th Grade Students	No. of Junior High Schools
by 1971	23.1	12.1	62
by 1973	37.3	25.2	127
by 1976	51.7	37.4	194
by 1979	59.2	44.5	238
by 1982	63.3	48.5	248
by 1985	64.6	53.6	274

Table 2: School Reform by Type of Community (Percentage)

	N	Reform	No Reform	Total
Cities	35	65.7	34.3	100.0
Local Councils	64	54.7	45.3	100.0
Regional Councils	48	77.0	23.0	100.0
TOTAL	147	64.6	35.4	100.0

Table 3: Research Variables by Averages and Standard Deviations

		No Reform (N=42)	Reform (N=93)	Total (N-135)
Size of Community Log No. of Residents	$\bar{X}$	.93	.70	.85*
	S.D	.48	.73	.58
Percentage of Students from Asian-African Origin	$\bar{X}$	63.60	65.12	64.07
	S.D.	23.98	24.70	24.12
Ethnic Heterogeneity of Community	$\bar{X}$	26.86	24.80	26.20
	S.D.	14.86	13.85	14.53
Percentage of Religious Students	$\bar{X}$	38.60	30.47	35.98*
	S.D.	27.36	31.11	28.74
Level of Educational Development	$\bar{X}$	2.11	1.56	1.94*
	S.D.	.49	.77	.64

Table 4: Correlations of Variables in Cities: Local and Regional Councils

	1	2	3	4	5	6
			Rural Communities (N=44)			
Reform		.40*	-.03	.42*	.14	.56*
Size of Communities	.21*		.20	.20	.25*	.30*
Percentage of Sephardic Students	.08	-.31*		-.12	.68*	-.19
Ethnic Heterogeneity	.09	.35*	-.87*		-.02	.34*
Percentage of Religious Students	.13	-.18*	.63*	-.57*		.16
Level of Educational Development	.34*	.75*	-.18*	.17*	-.04	
			Urban Communities (N = 91)			

Table 5: Discriminant Analysis: Demographic Variables Classified by the Implementation of School Reform for Urban, Rural and all Communities

	Rural Communities	Urban Communities	All Communities
Community Size	.40	-.06	-.18
Percentage of Sephardic Students	.05	-.05	.00
Ethnic Heterogeneity	.43	-.34	.06
Percentage of Religious Students	.02	.24	.29
Level of Educational Development	.70	1.00	1.03
R cannonical	.65	.37	.43
Wilkes Lambda	.57	.86	.82
Significance	.000	.023	.000
Centroids			
No Reform	-1.54	-.53	-.68
Reform	.43	.30	.32
Percentage of Classification	86.36	69.23	77.00